

# Hart Creosoting Company

## Jasper, Texas

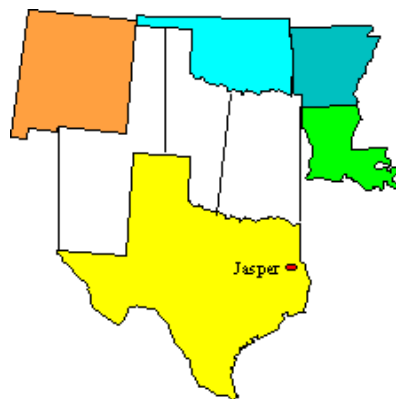
EPA Region 6

EPA ID# TXD050299577

Site ID: 0601975

State Congressional District: 2

Fact Sheet Updated: July 10, 2003



### SITE DESCRIPTION

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**Location:** The site is a former wood treatment facility which utilized coal-tar creosote located one mile south of the City of Jasper in Jasper County, Texas. The site is on the western side of State Highway 96, approximately 1 mile south of U. S. Highway 190. The site location coordinates are latitude 30° 53' 38" N, longitude 93° 59' 41" W.

**Population:** The approximate population of the City of Jasper is 7,000 people. Approximately 1,000 people live within a one-mile radius of the site.

**Setting:** Hart Creosote Company site is a former wood treatment facility, which at various times, performed wood treatment, pole peeling, and pipe threading operations on 8.8 acres out of a total site of 442 acres.

The site is located approximately one mile south of downtown Jasper in an industrial/commercial wooded area. There are forests to the south and north and an operating automotive detailing business east of the site. Other commercial businesses are located across U.S. Highway 96. The intermittent, unnamed creek and another woodland area are located along the western border of the site. The adjacent unnamed creek discharges into Big Walnut Run Creek approximately 1¼ mile south of the site. Big Walnut Run Creek ultimately discharges into the Neches River, approximately 24 miles downstream from its confluence with the unnamed creek.

**Hydrology:** The site is located on the outcrop of the Jasper Aquifer, a continuous 1,200-foot deep aquifer which serves as the primary source of drinking water for the Upper Jasper County Water Authority. Two public and 39 private wells are located within 4 miles of the site. The private wells are used for drinking water and irrigation purposes. The nearest off-site private water wells are approximately 0.5 and 1 mile south of the site. Each of these wells serves two people. The two public water supply wells, used as sources of drinking water, serve approximately 12,000 users and are located approximately 3 miles north of the site at depths of 764 and 802 feet BGL.

## WASTES AND VOLUMES

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The EPA determined that the main chemicals of potential concern for the site include semi-volatile organic compounds (SVOCs) detected during the sampling efforts mentioned above, which are primarily polycyclic aromatic hydrocarbons (PAHs). All but 4 of the 21 SVOCs detected (1,1'-biphenyl, carbazole, dibenzofuran, and phenol) in the various site investigations are PAHs.

A wastes cell was constructed during the EPA 1995 removal action to store pond sediments and contaminated soil from the site. The waste cell is approximately 2.25 acres in area and has an approximate depth of 15 feet. The estimated volume of the waste cell, with a 20% contingency, is 65,400 cubic yards. In the five samples collected from the waste cell, the total concentration of SVOCs ranged from 330 to 2,855 mg/kg. The concentration of total petroleum hydrocarbons (TPH) ranged from 2,790 to 8,470 mg/kg. Cresol concentrations in the Toxicity characteristic leaching procedure (TCLP) extracts ranged from 0.0164 to 0.276 mg/L.

An unnamed creek (tributary to Big Walnut Run Creek) and the shallow ground water in proximity to the creek has extensive contamination. Pockets of solidified creosote were observed in the creek in an area west of the former wood-treating area. In sediment collected in the unnamed creek downstream of the solidified creosote, the total SVOC concentration was 871.6 mg/kg. The concentration in a collocated surface water sample was 0.323 mg/kg. High levels of contamination were detected in sediment and surface water samples approximately 1,100 feet downstream of the solidified creosote. The total SVOC concentrations in these samples were 50.1 mg/kg and 0.258 mg/kg, respectively. Elevated concentrations of SVOCs above background were detected downstream to the confluence with Big Walnut Run Creek.

The primary sources of subsurface contamination were found in the location of the former wood treating area and the former Pond A. Elevated levels of PAHs were identified in soil borings adjacent to the creek. This area, in the 0 to 20 feet BGL zone, was found to be heavily contaminated with PAHs (as high as 13,580 mg/kg). The concentrations of PAHs appear to drop after 20 feet BGL, until dense non-aqueous phase liquid (DNAPL) is discovered in the depths of 45 feet BGL and greater. DNAPL was detected to depths of 80 feet BGL. A sample recovered from 70.5 to 72 feet BGL was saturated with creosote. The total PAH concentration in this sample was 59,000 mg/kg. Contamination was intermittently detected along the boring. Because this sample only went to 93 feet BGL, it is possible that DNAPL contamination is present at deeper depths.

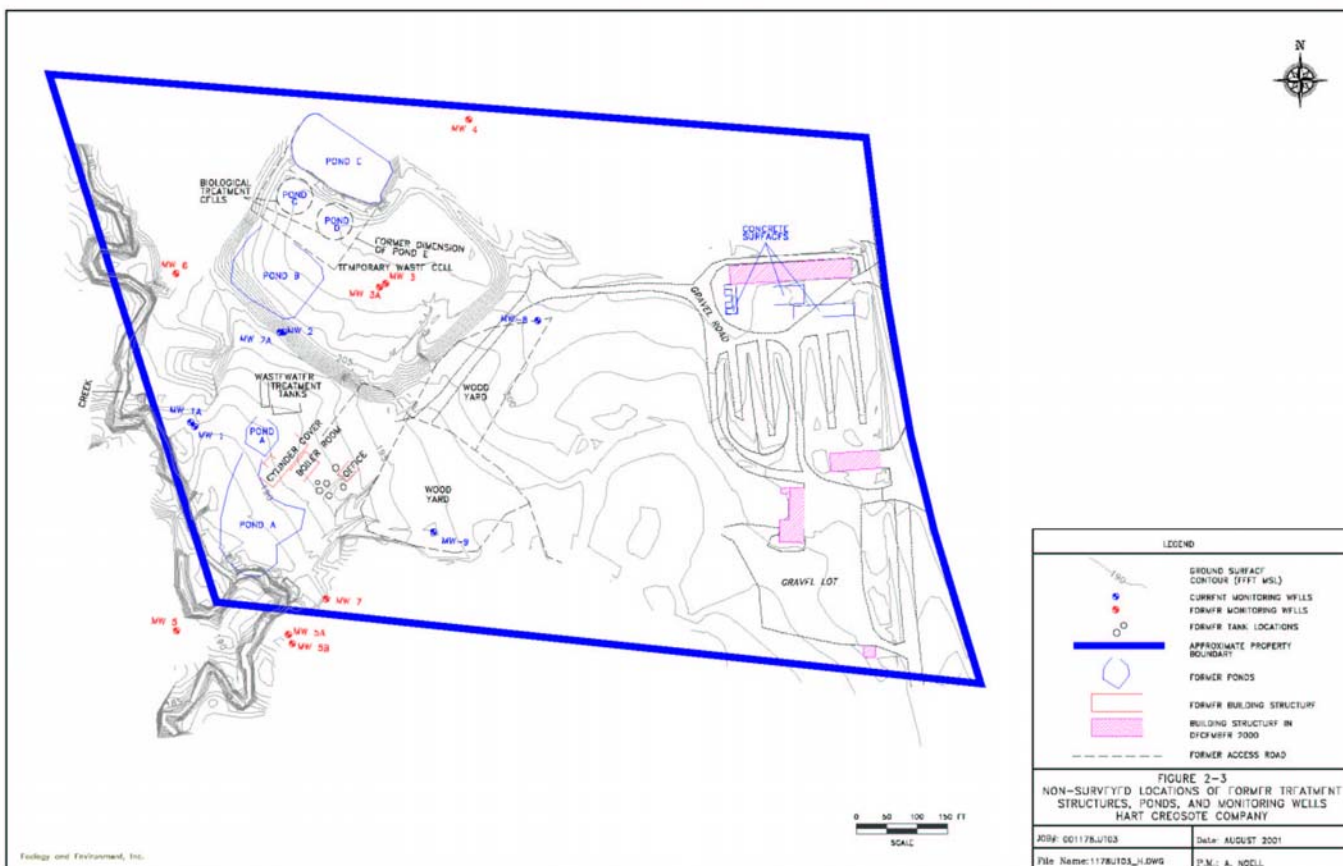
## SITE ASSESSMENT AND RANKING

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### NPL LISTING HISTORY

Site HRS Score:	48.03
Proposal Date:	April 23, 1999
Final Date:	July 22, 1999

## SITE MAP



## THE REMEDIATION PROCESS

### Site History

Between 1984 and 1991, state environmental agencies repeatedly cited the facility for violations of the Resource Conservation and Recovery Act (RCRA). Several site investigations and an EPA Removal Action have occurred at the Hart Creosote Company site since operations ceased in May 1993.

- In February 1984, the Texas Department of Water Resources, now the TNRCC, conducted a Preliminary Assessment and Site Inspection and determined that there was ground water contamination from the site.
- In February 1993, the TNRCC collected eight sediment and four surface water samples from the unnamed creek. SVOCs were detected above background at all six of the sediment sampling locations. Concentrations of total PAHs in sediment ranged from 252 mg/kg to 4,823 mg/kg in the creek (approximately 1/3 mile downstream from the site). Surface water total PAH contamination in the creek ranged from 170 mg/L to 100 mg/L. Total PAHs in surface water included: 2,4-dimethylphenol (22 µg/L), fluoranthene, naphthalene (53 µg/L), phenanthrene, and phenol.

- In 1994, the owner of the Hart Creosote Company facility dismantled and removed the on-site tanks, structures and buildings.
- In February/March 1994, the TNRCC conducted an Expanded Site Inspection (ESI). Samples were collected from ground water, sediment, and soil. Total PAH concentrations detected in ground water were 8.7 mg/L. Total PAH concentrations in the sediment ranged from 153 mg/kg to 6,270 mg/kg. Total PAH concentrations in the soil ranged from 6.1 mg/kg (collected from the most eastern portion of the site) to 2,490 mg/kg in the former processing area. Low levels of volatile organic compounds (VOCs) including toluene, ethylbenzene, and xylene were also detected in ground water and sediment.
- In January 1995, two surface water samples were collected by the TNRCC from the west side of the former process area and the west side of Pond A. PAHs benzo(b)fluoranthene, benzo(a)anthracene, and chrysene exceeded the maximum contaminant level goal for drinking water (zero µg/L).
- From July 1995 through October 1995, EPA conducted a time-critical removal action to drain the on-site impoundments and stabilize the remaining sludges. Sludges and visibly contaminated soils were consolidated into an on-site temporary waste cell.
- In July 1998, as part of the Hazard Ranking System (HRS) evaluation, the TNRCC collected six sediment samples from Big Walnut Run Creek. The maximum reported concentration of benzo(a)pyrene in Big Walnut Run Creek was 1.28 mg/kg approximately 2,200 feet downstream of the junction of Big Walnut Run Creek and the unnamed creek. Total PAH concentrations ranged from 0.886 mg/kg [in the sample 800 feet downstream of the probable point of entry (PPE) where the unnamed creek enters into Big Walnut Run Creek] to 25.3 mg/kg at the PPE.
- In 2000, the Texas Department of Health (TDH) and the Agency for Toxic Substances and Disease Registry (ATSDR) conducted a Public Health Assessment (PHA) for the site. The PHA concluded that the site posed no apparent public health hazard at that time. Because of a lack of information, the PHA did not assess the public health implications of exposure to site contaminants through the food chain (fish) and concluded that this exposure situation was an indeterminate public health hazard. The PHA also noted that although the obvious sources of contamination from the site have been removed (from the EPA removal action), a sheen was observed on the surface of water in the intermittent creek.
- During a 2001 Engineering Evaluation/Cost Analysis (EE/CA), PAHs were detected in soil, sediment, and surface water samples collected in and along an unnamed tributary to Big Walnut Run Creek.

In 1995, EPA conducted a time-critical removal action to drain and treat water from four of the five on-site impoundments. After the ponds were drained, remaining sludges from the pond and visibly contaminated soil from the site were excavated, consolidated, and stored on-site in a fenced, natural clay-lined waste cell. The temporary waste cell was expanded during the removal to accommodate the substantial amount of contaminated soil that was excavated from the site. The bottom of the temporary waste cell was graded and compacted to ensure durability. The cell was covered and seeded for erosion control. This temporary waste cell was completed on September 1, 1995 and surrounded by a six-foot high intruder-resistant fence that was posted with warning signs.

## **Health Considerations**

The PAHs present the primary threat to public health and welfare from the site. Other constituents of coal tar creosote, including 1,1'-biphenyl, carbazole, and dibenzofuran were also identified at the site. Available literature reveals that numerous PAHs and carbazole are possible carcinogens. Reports on long term human exposure to PAHs in mixtures with other compounds through inhalation and dermal exposure have resulted in cancer. PAHs have caused tumors in laboratory animals through inhalation, oral, and dermal exposures. In addition, animal studies have revealed that developmental, reproductive, and immunosuppression health effects have occurred with exposure to PAHs through the various exposure routes.

## **Other Environmental Risks**

Sediment in the unnamed creek contains site-related chemicals (i.e., PAHs) at levels that may adversely affect the benthic organism community known to exist in these types of sediments. Creosote in the surface water and sediment of the creek has the potential to adversely impact aquatic life, including benthic invertebrates, amphibians, reptiles, fish, and algae, currently and in the future. Terrestrial wildlife, including birds and mammals that use the creek as a source of drinking water and food, could be exposed to contaminants.

## **RECORD OF DECISION**

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No ROD has been signed for the site

## COMMUNITY INVOLVEMENT

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Community Relations Plan: January 2000

Site Repository: Jasper Public Library  
175 E. Water Street  
Jasper, TX  
409-384-3791

## TECHNICAL ASSISTANCE GRANT

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Grant Award: none

## SITE CONTACTS

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EPA Remedial Project Manager:	Bob Sullivan	214-665-2223 or 1-800-533-3508
EPA On-Scene Coordinator:	Rita Engblom	214-665-8341 or 1-800-533-3508
State Contact:	Bob Wucher	512-239-2443 or 1-800-633-9363
Site Attorney:	James Bove	214-665-2794
EPA Regional Public Liaison	Arnold Ondarza	303-312-6777

## PRESENT STATUS AND ISSUES

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- EPA conducted a removal action in 1995 to remove existing tanks, structures and equipment, remove liquid waste for off-site disposal, drain the on-site impoundments, stabilize the remaining sludge, and consolidate the sludge and contaminated soil into an on-site waste cell.
- EPA conducted an EE/CA in 2001 to investigate contamination in the unnamed tributary and the on-site waste cell.
- An Action Memorandum requesting approval to conduct a Non-Time Critical (NTC) Removal Action at the site was signed on September 27, 2001. The objective of the proposed removal action is to reduce or eliminate principal threat wastes at the site, thereby minimizing or eliminating risks to human health and the environment from potential exposure to those wastes. The areas to be addressed in this removal action include: 1) an unnamed creek [tributary to Big Walnut Run Creek] and the shallow contaminated ground water that contributes to its contamination; and, 2) an on-site temporary waste cell.
- The designs for the Non-Time Critical Removal Action are being finalized in July 2003.
- The objective of the selected action is biological treatment of contaminated soils within and adjacent to the waste cell, and removal of source material from the unnamed tributary followed by application of in-situ phytoremediation and constructed wetland technologies.
- A Removal Action Contract has been signed by EPA and the State of Texas.
- EPA continues to monitor the site to ensure that there is no immediate threat to human health or the environment pending the start of long-term cleanup work.
- The EPA is currently preparing a work plan to conduct a Remedial

Investigation/Feasibility Study (RI/FS) and baseline risk assessment for the site. The primary focus of the RI/FS is to determine the extent of contamination in soil and ground water and to propose actions for mitigation.

- To date, EPA has spent approximately \$2.6 Million for removal action and design work at this site.
- EPA's actions taken to date have considerably lessened the potential for human health or environmental exposure. EPA has determined that this site does not pose an immediate threat to human health, and will continue to monitor this site for changes that may trigger additional action. EPA will consider funding for this site in Fiscal Year 2004.

## **BENEFITS**

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The clean-up of the contamination present at the Hart Creosoting Company Superfund site will ensure the protection of human health and the environment.